NORTHERN ARIZONA UNIVERSITY

College of Engineering, Forestry, and Natural Sciences

Group:	James Beasley, Charles Beck, Charles Duso, Alexander Grzesiak, Erik Strauss
Project Title:	Boston University - Microfluid Experimentation Data Generator
Deliverable:	D.1.2. Consumer Discovery
Course:	CS386 – Spring 2017
Instructor:	Professor Gerosa
Github:	https://github.com/TheAwesomeEgg/CS386ProjectGroup1.git

Vision: Trident

Introduction

Trident is a web application is to be used in research towards microfluidic experimentation being conducted at Boston University. The application will allow researchers at Boston University to easily communicate instructions to the hardware they are developing for experimentation.

Positioning

The core audience of this product are the students, professors at Boston University, and any entity working with Boston University to achieve their research goals. What we would like to achieve is a web UI that allows users to create data structures, and containing processes that will be executed by hardware at the same time as retrieving information from the experiments in one file. We want the university to be able to generate experiments and produce commands quickly.

Problem Statement

The problem of	BU currently is without a system in which they can communicate instructions to their experimental hardware.
affects	This affects Boston University, the students , and the professors. Also anyone working with this team.
the impact of which is	Having the ability to manipulate microfluidics
a successful solution would be	Fast, reliable, and accurate

For	BU Microfluidics
Who	Researchers that can generate experiments
Trident	Is a web application
That	Generates commands in a file that experimental hardware can use.
Unlike	Manually written commands
Our product	Autonomously generates commands based off guide lines

Stakeholder Descriptions

Stakeholder Summary

Name	Description	Responsibilities
Boston University: Bio-medical engineering	BU is a private research university. The Bio-medical department is researching microfluidics.	The stakeholder maintains a market for this product. They also keep the product in use or generate interests into a product of similarity.

User Environment
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Add information about what they use to write commands and how they can use our application to improve their environment. How does our product interact with their world?

Product Overview

Needs and Features

Need	Priority	Features	Planned Release
Usability	High	Useable on any device, Easy to understand the U/I and I/O	End of Cycle
Conversion of Commands	High	Translate guidelines into commands	End of Cycle

File Manipulation	High	Reading in files of readable commands, Writing to new files.	End of Cycle
Reliability	High	Correct command conversion, Always available. Being precise in changes. Secure in data and techniques used.	End of Cycle
Speed	Med	Reading and writing instructions quickly	End of Cycle

Other Product Requirements

Requirement	Priority	Planned Release
Robustness	Med	
Good U/I	Low	
Portability	High	
Scale	Med	
Security	Low	